

### REMARKS

By this Amendment, the claims have been amended to remove the noted informalities and correct the objectionable material and new claims 23-32 are added to more fully claim the disclosed invention. Claims 23-32 are patentable over the cited prior art for reasons commensurate with those presented herein with regard to independent claims 1 and 12. Claims 1-32 are pending.

#### Claims Objections and 35 U.S.C. 112 Rejections

##### Claims 1, 2, 12 and 13

Claims 1-22 were rejected under 35 U.S.C. 112, second paragraph, for alleged indefiniteness. Applicant has amended claims 1, 2, 12 and 13 to remove the noted informalities. In particular, in claims 1 and 12, Applicant has replaced the phrase “the number of all frames received and decoded correctly” with “the number of all frames received and correctly decoded,” to clarify that calculation is for those frames which are both received and also correctly decoded. Applicant also directs attention to paragraphs [0033], [0039] - [0041] of the specification, where it is explained that the user data is channel coded with a selected channel coding and that it is then channel decoded, with a Viterbi decoder, for example.

##### Claims 5 and 16

Applicant has amended claims 5 and 16 to remove noted informalities; however, with regard to point b, Applicant further submits that the claimed receiver includes functionality that allows it to signal, i.e., transmit one or more signals that facilitate its proper communication with a corresponding transmitter(s). Thus, claim 5 has been amended to clarify the existence of that functionality; however, claim 16 already includes sufficient language to provide an understandable definition by one of ordinary skill on this point.

##### Claims 6, 7, 17 and 18

Applicant has amended the claims to remove the noted informalities.

#### Prior Art Rejections

The Office Action rejected claims 1, 5, 10, 12, 16 and 21 under 35 U.S.C. 103(a) as being unpatentable over Rasanen et al.(U.S. 5,920,545; hereafter “Rasanen”) and Bonta et

al.(U.S. 6,097,957; hereafter “Bonta”). Claims 6-9, 11, 17-20 and 22 were also rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen, Bonta and Minde et al. (U.S. 6,201,960; hereafter “Minde”). Applicant traverses the rejections because the cited prior art fails to disclose, teach or suggest all the features recited in the rejected claims.

For example, the cited prior art fails to disclose, teach or suggest the claimed method of measuring the quality of a circuit-switched service transmitted on a traffic channel between a transmitter and a receiver in a cellular radio network, comprising “the transmitter omitting transmission of all data frames of the traffic channel to the receiver based on a determination that the user data are missing; . . . the transmitter calculating a number of frames transmitted to the receiver on the traffic channel during a certain time period; the receiver calculating a number of all frames received and correctly decoded during that certain time period; and calculating a quality value for a service to be transmitted on the traffic channel during that certain time period by subtracting the number of frames transmitted during that certain time period from the number of frames received and correctly decoded during that certain time period and by dividing the difference obtained by the number of frames transmitted during that certain time period,” as recited in independent claim 1 and its dependent claims.

Similarly, the cited prior art, analyzed individually or in combination, fail to disclose, teach or suggest the claimed cellular radio network comprising a transmitter and a receiver, wherein the transmitter comprising means for omitting transmission all data frames of the traffic channel to the receiver based on a determination that the user data are missing; . . . and means for calculating a number of all frames transmitted to the receiver on the traffic channel during a certain time period; the receiver comprising: means for calculating a number of all frames received on the traffic channel and correctly decoded during that certain time period; and the cellular radio network comprising: means for calculating a quality value for a service transmitted on the traffic channel during that certain time period by subtracting the number of frames transmitted during that certain time period from the number of frames received and correctly decoded during that certain time period, and by dividing the difference obtained by the number of frames transmitted during that certain time period,” as recited in independent claim 12 and its dependent claims.

Rasanen, in particular those passages referred to specifically by the Office Action, merely relate to a GSM system, wherein correctness of each frame is tested at the receiving end. In that configuration, the receiver sends a (negative) acknowledgement using the frame

number. Subsequently, the unsuccessfully received frames are retransmitted. Thus, quality of the connection is monitored (column 3 lines 17-18).

However, Rasanen fails to disclose, teach or suggest omitting transmission of data frames based on a determination that the user data is missing. Although the Office Action referred to Rasanen at column 4, lines 35-37, as allegedly disclosing transmission of a radio burst and contents therein, Rasanen fails to disclose determining whether to omit transmission when data is not present. To the contrary, Rasanen only discloses the form of the transmission in TDMA-frames, i.e., time slots.

Further, Rasanen fails to disclose, teach or suggest calculation, by the transmitter, of a number of frames transmitted to the receiver on the traffic channel during a certain time period. The Office Action asserted that, in Rasanen, the frames are numbered. However, Applicant submits that such a numbering scheme is irrelevant because the "certain time period" would not start at the same moment as the numbering starts. As a result, simple frame numbering would not provide the number of frames transmitted during a certain time period.

Moreover, Rasanen fails to disclose, teach or suggest a receiver calculating a number of frames received and correctly decoded during that certain time period. Contrary to the Office Action's assertions, column 1, lines 58-60 of Rasanen merely describe a receiver's acknowledgement of a received frame using the frame's frame number, i.e., frame index. However, Rasanen's receiver does not report the number (i.e., the quantity) successfully received and correctly decoded frames.

Likewise, Rasanen fails to disclose, teach or suggest calculation of a quality value for a service to be transmitted on the traffic channel during a certain time period by subtracting the number of frames transmitted during that certain time period from the number of frames received during that certain time period and by dividing the difference obtained by the number of frames transmitted during that certain time period. The Office Action acknowledged that Rasanen failed to calculate a quality value, but asserted that Rasanen monitors channel quality, which, in the Office Action's interpretation might be based on calculating a success ratio. However, the equation identified in the Office Action merely calculates the re-transmission rate of the frames. As a result, that equation is merely used to determine whether to release additional channel resources.

Moreover, Rasanen fails to recognize problems caused by discontinuous transmission; thus, Rasanen fails to teach or suggest that silence descriptor claims may be transmitted in place of data frames (as recited in claim 2). SID frames are not numbered according to the GSM 04.22 specification, which states:

"5.6 Support for discontinuous transmission (DTX) In both ADM and ABM, whenever the RLP entity has no numbered or unnumbered supervisory commands/responses and no information transfer frames pending transmission, the RLP entity shall indicate to the lower layer that the DTX function may be invoked. NOTE: In case DTX is invoked, in ADM a NULL-frame will be sent, and in ABM an RR or RNR S-frame will be sent."

Therefore, even if Rasanen discloses the numbering of frames, Rasanen fails to disclose, teach or suggest all the features recited in particularity in the rejected claims.

Bonta fails to remedy these deficiencies because Bonta (in particular, column 4, lines 41-44 and column 6, lines 13) merely discloses calculation of a frame erasure rate data in a modem simulator. In fact, the frame erasure rate of Bonta is only the fraction of frames erased in relation to the total frames; however, Bonta fails to specify what the "total frames" actually is a measurement of. Moreover, Applicant submits that the claimed invention is not merely the concept of a frame erasure rate itself, but involves the way the frames are counted. Therefore, Rasanen, analyzed individually or in combination with Bonta, fails to teach or suggest the claimed invention.

Furthermore, Minde also fails to remedy the deficiencies of Rasanen and Bonta because Minde merely teaches monitoring the bit error rate, among other parameters to assess speech quality

Accordingly, the cited prior art, analyzed individually or in combination fail to disclose, teach or suggest the claimed invention. As a result, claims 1-31 are allowable.

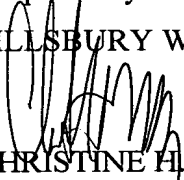
All objections have been addressed. If anything further is necessary to place the application in condition for allowance, Applicant requests that the Examiner contact Applicant's undersigned representative at the telephone number listed below.

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Respectfully submitted,

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